Title (en)

A GLOBAL POSITION SYSTEM (GPS) USER RECEIVER AND GEOMETRIC SURFACE PROCESSING FOR ALL-IN-VIEW COHERENT GPS SIGNAL PSEUDO-RANDOM NOISE (PRN) CODES ACQUISITION AND NAVIGATION SOLUTION DETERMINATION

Title (de)

BENUTZEREMPFÄNGER FÜR EIN GLOBALES POSITIONIERUNGSSYSTEM (GPS), VERARBEITUNG GEOMETRISCHER OBERFLÄCHEN ZUR ERFASSUNG KOHÄRENTER ALL-IN-VIEW-PRN-CODES UND BESTIMMUNG EINER NAVIGATIONSANWENDUNG

Title (fr)

RÉCEPTEUR D'UTILISATEUR DE SYSTÈME DE POSITIONNEMENT MONDIAL (GPS) ET TRAITEMENT DE SURFACE GÉOMÉTRIQUE POUR UNE DÉTERMINATION DE SOLUTION DE NAVIGATION ET D'ACQUISITION DE CODE DE BRUIT PSEUDO-ALÉATOIRE (PRN) DE SIGNAUX GPS COHÉRENTS VISIBLES

Publication

EP 2049915 A2 20090422 (EN)

Application

EP 07836612 A 20070807

Priority

- US 2007017613 W 20070807
- US 50155606 A 20060809

Abstract (en)

[origin: WO2008021121A2] A method and system for enabling a more robust detection, acquisition and positioning solution capability for a GPS device. The system and method uses GPS satellite ranging signals based on a simultaneous, all-in-view coherent PRN code signal processing scheme, rather than acquisition of GPS signals one at a time, in order to predict a location of a GPS user receiver. Additionally, image processing techniques, ultra-tight coupling processing techniques, or a combination thereof, are used to further enhance accuracy in determining the location of the user receiver. Signal processing techniques are used to determine the location of the GPS user receiver when no GPS satellite ranging signals can be individually detected, or when only one or two strong GPS satellite ranging signals can be individually detected in weak signal environments, jamming conditions, and a combination thereof.

IPC 8 full level

G01S 19/25 (2010.01); **G01S 1/00** (2006.01); **G01S 5/02** (2010.01); **G01S 5/14** (2006.01); **G01S 19/24** (2010.01); **G01S 19/51** (2010.01)

CPC (source: EP US)

G01S 19/24 (2013.01 - EP US); **G01S 19/25** (2013.01 - EP US); **G01S 19/252** (2013.01 - EP US); **G01S 19/393** (2019.07 - EP US); **G01S 19/51** (2013.01 - EP US)

Citation (search report)

See references of WO 2008021121A2

Designated contracting state (EPC)

AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LI LT LU LV MC MT NL PL PT RO SE SI SK TR

Designated extension state (EPC)

AL BA HR MK RS

DOCDB simple family (publication)

WO 2008021121 A2 20080221; **WO 2008021121 A3 20080410**; **WO 2008021121 B1 20080612**; AT E463750 T1 20100415; DE 602007005809 D1 20100520; EP 2049915 A2 20090422; EP 2049915 B1 20100407; JP 2010500562 A 20100107; JP 2014178321 A 20140925; JP 5780701 B2 20150916; JP 5957025 B2 20160727; US 2009171583 A1 20090702; US 7688261 B2 20100330

DOCDB simple family (application)

US 2007017613 W 20070807; AT 07836612 T 20070807; DE 602007005809 T 20070807; EP 07836612 A 20070807; JP 2009523830 A 20070807; JP 2014056325 A 20140319; US 50155606 A 20060809